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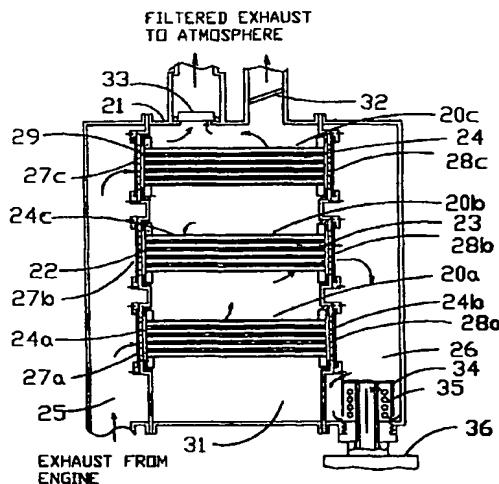
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(54) Title: APPARATUS AND METHOD FOR FILTERING PARTICULATE AND REDUCING NO_x EMISSIONS



WO 03/086580 A1

(57) Abstract: An apparatus and method for filtering particulate from an internal combustion engine by use of monolithic particulate trap systems having porous walls (2c, 24c). The porous walls (2c, 24c) filter the particulate. The filtered particulate on inner surfaces of the porous walls is periodically removed or regenerated via back flow of previously filtered exhaust gas. The back flow is caused by creating a pressure difference across the porous walls. The back flow of the previously filtered exhaust gas is simultaneously or sequentially coupled with high velocity through flow of exhaust gas in the channels. In addition, the particulate trap system can be an adsorber-catalyst particulate trap system for filtering particulate and reducing NO_x via an adsorber-catalyst trap systems to achieve the EPA 2007 standards.